

Project Design Phase-I
Proposed Solution Template

Date	18 October 2023
Team ID	PNT2023TMID593074
Project Name	Arming Against Violence - YOLO-Based Weapon Detection
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	To make public places safer, we require an automatic system that uses Convolution Neural Networks (CNN) to detect weapons. This system will enhance security, expedite our response to threats, and help in maintaining public places safer by quickly identifying weapons, and averting security concerns.
2.	Idea / Solution description	For this project we would be working with YOLO (You only look once) a pretrained object detector CNN model which is known for its speed and accuracy. The system will be trained on a dataset containing weapons, and will detect them in real-time, ensuring rapid response to threats.
3.	Novelty / Uniqueness	YOLO weapon detection is a novel approach to real-time object detection that is fast and accurate, even in challenging conditions. It can be deployed 24/7, making it a powerful tool for enhancing security and public safety.
4.	Social Impact / Customer Satisfaction	YOLO weapon detection enhances public safety and customer satisfaction by deterring crime and protecting lives and property. It could also create job opportunities in system maintenance and oversight, contributing to a safer society.

5.	Business Model (Revenue Model)	YOLO weapon detection business model relies on equipment sales, maintenance services, and licensing fees. Government partnerships play a crucial role in funding and expansion. By enhancing security, the aim is to boost customer satisfaction and contribute to a safer society.
6.	Scalability of the Solution	YOLO weapon detection systems have the capability to integrate with existing security technologies, like video surveillance and access control, resulting in a strong security solution. The system can also be trained to identify new weapon types and operate effectively in challenging environments, thereby enhancing safety and security.